

## Formulation strategies

- properties associated with drug
  - bulk properties
  - physicochemical properties
  - stability considerations
  - biopharmaceutical considerations
- marketing considerations
- economic considerations
- company expertise

## Preformulation

- bulk properties
  - organoleptic
  - crystallinity and polymorphism
  - water adsorption
  - particle size, shape, and surface area
  - bulk density
  - adhesion
  - powder flow
  - compressibility

## Preformulation

- physico-chemical properties
  - solubility analysis
  - ionization
  - partition coefficients
  - dissolution
- stability
  - solid state (RH, oxygen, light, compatibility)
  - solution (pH, buffers, solvent, temperature)
  - compatibility with excipients

## Preformulation

- biopharmaceutical properties
  - absorption (route, rate, extent, mechanism, absorption windows, food effects)
  - metabolism (first pass metabolism, enzyme induction, metabolism in GIT)
  - duration of action (dosing, controlled release)
  - dose